



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[EPA-HQ-SFUND-1990-0011; FRL-9646-1]

National Oil and Hazardous Substances Pollution Contingency Plan;

National Priorities List: Partial Deletion of the Ellsworth Air Force Base Superfund Site

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule; notice of intent.

SUMMARY: The Environmental Protection Agency (EPA) Region 8 is issuing a Notice of Intent to Delete Operable Unit (OU) 1 the former Fire Protection Training Area (FPTA), along with two other Areas of Concern (AOC): the Gateway Lake Ash Study Area and the Pride Hangar Study Area of the Ellsworth Air Force Base (AFB) Superfund Site located in Meade and Pennington Counties, South Dakota, from the National Priorities List (NPL) and requests public comments on this proposed action. The NPL, promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, is an appendix of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The EPA and the State of South Dakota, through the Department of Environment and Natural Resources, have determined that all appropriate response actions at these identified parcels under CERCLA other than five year reviews have been completed. However, this deletion does not preclude future actions under Superfund.

This partial deletion pertains to the surface soil, unsaturated subsurface soil, surface water and sediments of Operable Unit (OU) 1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area. The groundwater medium associated with OU-

11, Basewide Groundwater, will remain on the NPL and is not being considered for deletion as part of this action. The other OUs associated with Ellsworth AFB were deleted in 2006.

DATES: Comments must be received by [insert date 30 days from date of publication in the Federal Register].

ADDRESSES:

Submit your comments, identified by Docket ID no. EPA-HQ-SFUND-1990-0011, by one of the following methods:

- <http://www.regulations.gov> . Follow on-line instructions for submitting comments.
- Email: dalton.john@epamail.epa.gov
- Fax: 303 – 312 – 6961
- Mail: Mr. John Dalton, Community Involvement Coordinator (8OC), U.S. EPA, Region 8, 1595 Wynkoop St., Denver, CO 80202
- Hand delivery: 1595 Wynkoop St., Denver, CO 80202. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID no. EPA-HQ-SFUND-1990-0011.

EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is

restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or e-mail. The <http://www.regulations.gov> Web site is an “anonymous access” system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through <http://www.regulations.gov>, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket:

All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in the hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at:

U.S. EPA Records Center
Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

(303) 312-6312

Hours: Mon – Fri, 8:30 a.m. to 5:00 p.m.

South Dakota Air & Space Museum

2890 Davis Drive, Building 5208

Ellsworth AFB, SD 57706

(605) 385-5188

Hours: Mon – Fri, 7:00 a.m. to 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Mark Aguilar, Remedial Project

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I. Introduction

EPA Region 8 announces its intent to delete OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Ellsworth AFB Superfund Site, from the National Priorities List (NPL) and requests public comment on this proposed action. The NPL constitutes Appendix B of 40 CFR part 300 which is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), which EPA promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. EPA maintains the NPL as the list of sites that appear to present a significant risk to public health, welfare, or the environment.

Sites on the NPL may be the subject of remedial actions financed by the Hazardous Substance Superfund (Fund). This partial deletion of the Ellsworth AFB Site is proposed in accordance with 40 CFR 300.425(e) and is consistent with the Notice of Policy Change: Partial Deletion of Sites Listed on the National Priorities List, 60 FR 55466 (Nov. 1, 1995). As described in 300.425(e)(3) of the NCP, a portion of a site deleted from the NPL remains eligible for Fund-financed remedial action if future conditions warrant such actions.

EPA will accept comments on the proposal to partially delete this site for thirty (30) days after publication of this document in the **Federal Register**.

Section II of this document explains the criteria for deleting sites from the NPL. Section III discusses procedures that EPA is using for this action. Section IV discusses OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Ellsworth AFB Superfund Site and demonstrates how they meet the deletion criteria.

II. NPL Deletion Criteria

The NCP establishes the criteria that EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. In making such a determination pursuant to 40 CFR 300.425(e), EPA will consider, in consultation with the State, whether any of the following criteria have been met:

- i. responsible parties or other persons have implemented all appropriate response actions required;

- ii. all appropriate Fund-financed response under CERCLA has been implemented, and no further response action by responsible parties is appropriate; or
- iii. the remedial investigation has shown that the release poses no significant threat to public health or the environment and, therefore, the taking of remedial measures is not appropriate.

Pursuant to CERCLA section 121(c) and the NCP, EPA conducts five-year reviews to ensure the continued protectiveness of remedial actions where hazardous substances, pollutants, or contaminants remain at a site above levels that allow for unlimited use and unrestricted exposure. EPA conducts such five-year reviews even if a site is deleted from the NPL. EPA may initiate further action to ensure continued protectiveness at a deleted site if new information becomes available that indicates it is appropriate. Whenever there is a significant release from a site deleted from the NPL, the deleted site may be restored to the NPL without application of the hazard ranking system.

III. Deletion Procedures

The following procedures apply to deletion of OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Site:

- (1) EPA consulted with the State before developing this Notice of Intent for Partial Deletion.
- (2) EPA has provided the state 30 working days for review of this notice prior to publication of it today.
- (3) In accordance with the criteria discussed above, EPA has determined that no further response is appropriate.

- (4) The State of South Dakota, through the Department of Environment and Natural Resources, has concurred with the deletion of OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Ellsworth AFB Superfund Site, from the NPL.
- (5) Concurrently, with the publication of this Notice of Intent for Partial Deletion in the **Federal Register**, a notice is being published in a major local newspaper, the Rapid City Journal.

The newspaper announces the 30-day public comment period concerning the Notice of Intent for Partial Deletion of the Site from the NPL.

- (6) The EPA placed copies of documents supporting the proposed partial deletion in the deletion docket and made these items available for public inspection and copying at the Site information repositories identified above.

If comments are received within the 30-day comment period on this document, EPA will evaluate and respond accordingly to the comments before making a final decision to delete OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area. If necessary, EPA will prepare a Responsiveness Summary to address any significant public comments received. After the public comment period, if EPA determines it is still appropriate to delete OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Ellsworth AFB Superfund Site, the Regional Administrator will publish a final Notice of Partial Deletion in the **Federal Register**. Public notices, public submissions and copies of the Responsiveness Summary, if

prepared, will be made available to interested parties and included in the site information repositories listed above.

Deletion of a portion of a site from the NPL does not itself create, alter, or revoke any individual's rights or obligations. Deletion of a portion of a site from the NPL does not in any way alter EPA's right to take enforcement actions, as appropriate. The NPL is designed primarily for informational purposes and to assist EPA management. Section 300.425(e)(3) of the NCP states that the deletion of a site from the NPL does not preclude eligibility for future response actions, should future conditions warrant such actions.

IV. Basis for Partial Site Deletion

The following information provides EPA's rationale for deleting OU-1, the Gateway Lake Ash Study Area, and the Pride Hangar Study Area of the Ellsworth AFB Superfund Site from the NPL.

Site Background and History

The Ellsworth AFB Superfund Site (CERCLIS ID #SD2571924644), is a United States Air Force Air Combat Command installation located 12 miles east of Rapid City, South Dakota, and adjacent to the small community of Box Elder. Ellsworth AFB is located within the following Sections, Townships, and Ranges, in Pennington and Meade Counties, South Dakota:

Sections 35 and 36, Township 3 North, Range 8 East, Meade County;

Section 31, Township 3 North, Range 9 East, Meade County;

Sections 1, 2, 11, 12, 13, Township 2 North, Range 8 East, Pennington and Meade Counties; and

Sections 5, 6, 7, 8, 17, 18, 19, Township 2 North, Range 9 East, Pennington and Meade Counties.

The main Air Base covers approximately 4,858 acres within Meade and Pennington counties and includes runways, airfield operations, industrial areas, housing, and recreational facilities.

The site was officially activated in July 1942 as the Rapid City Army Air Base, a training facility for B-17 bomber crews. Ellsworth AFB has been the headquarters of operations for a variety of aircraft, the Titan I Intercontinental Ballistic Missile system and the Minuteman I and Minuteman II missile systems. Ellsworth AFB has historically provided support, fueling, training, maintenance, and/or testing facilities.

Operations at Ellsworth AFB over the years generated a variety of waste materials including municipal solid waste, wastewater treatment plant sludge, industrial wastes including waste oils, solvents, paints, spilled fuels, waste pesticides, shop waste, metal remains from ordnance disposal (shell casings and bomb fragments but not unexploded ordnance) and radiological wastes. Contaminants of concern at Ellsworth AFB include chlorinated solvents, waste fuels, and metals.

Ellsworth AFB was proposed for listing on the NPL October 26, 1989 (54 FR 43779), placed on the NPL August 30, 1990 (55 FR 35509), and is therefore subject to the provisions of Section 120 of CERCLA, 42 U.S.C. 9620. At that time, the entire base, approximately 4,858 acres, was included in the listing (“fence line to fence line”). The Department of Defense, EPA and the State of South Dakota entered into a Federal Facilities Agreement (FFA) which formalizes the process for environmental response actions and the relative roles of the Air Force, EPA and the State of South Dakota under

CERCLA and the Installation Restoration Program (IRP). The FFA was signed by the Air Force, the EPA, and the State of South Dakota in January 1992 and became effective on April 1, 1992.

Upon listing, the facility began identifying sites where activities involving hazardous substances may have occurred. The sites requiring further investigations were grouped into Operable Units (OUs). Twelve OUs were identified at Ellsworth AFB. The OUs include: OU-1, Fire Protection Training Area; OU-2, Landfills Nos. 1 and 6; OU-3, Landfill No. 2; OU-4, Landfill No. 3; OU-5, Landfill No. 4; OU-6, Landfill No. 5; OU-7, Weapons Storage Area; OU-8, Explosive Ordnance Disposal Area; OU-9, Old Hobby Shop Area; OU-10, North Hangar Complex; OU-11, Basewide Groundwater; and OU-12, Landfill No. 1. Records of Decision (RODs) were finalized for all of these OUs between October 1995 and April 1997.

Surface soil, unsaturated subsurface soil, surface water, and sediments at OU-2, OU-3, OU-4, OU-5, OU-6, OU-7, OU-8, OU-9, OU-10 and OU-12 (approximately 542 acres) and the surface soil, unsaturated subsurface soil, surface water and sediment media of an additional 4,300 acres not associated with an operable unit were deleted from the NPL December 4, 2006 (71 FR 70318).

Four areas not deleted in 2006 were OU-1 (all media), OU-11 (Basewide Groundwater) [including all groundwater plumes located within the Base boundary and those described as emanating from the Base], and two Areas of Concern: the Gateway Lake Ash Study Area and the Pride Hangar Study Area. Appropriate response actions for soil media have since been completed at OU-1, the Pride Hangar Study Area and the Gateway Lake Ash Study Area. The remedial investigation/feasibility study (RI/FS)

process did not identify any unacceptable risks for surface water and sediment at these areas. Therefore, remedial actions were not required for surface water and sediment.

The portions of the Ellsworth AFB Site to be deleted from the NPL are:

- Surface soil, unsaturated subsurface soil, surface water and sediment media at OU-1 [generally described by the following coordinates:
N667749.88/E1242611.11; N667496.84/E1242812.29;
N667330.75/E1242852.01; N666933.49/E1242558.40;
N667158.53/E1242265.75; N667787.47/E1242276.80;
N667749.88/E1242611.11]
- Gateway Lake Ash Study Area [generally described by the following coordinates:
N667944.01/E1248056.74; N667694.15/E1248058.87;
N667695.57/E1247811.84; N667947.55/E1247834.49;
N667944.01/E1248056.74]
- Pride Hangar Study Area [generally described by the following coordinates:
N673538.32/E1243066.96; N673267.45/E1243270.27;
N673228.21/E1243223.95; N673113.04/E1243308.87;
N673021.04/E1243204.65; N673409.00/E1242911.91;
N673538.32/E1243066.96].

OU-1 consists of the former Fire Protection Training Area (FPTA), Pond 001, and a portion of the drainage channel that leads into Pond 001. The former FPTA is approximately 10 acres in size and is located in the southwestern portion of Ellsworth AFB. The FPTA was operated by the Ellsworth AFB at this location from 1942 to 1990. The location of the burn area within the former FPTA has changed several times over the

years. Aerial photographs of Ellsworth AFB show numerous areas of staining presumed to be a result of the fire training activities within the former FPTA. The training exercises conducted at the FPTA involved simulation of aircraft fires and spills and consisted of dispersing various fuels, oils and solvents within the burn pit area and subsequently igniting and extinguishing the fire. Extinguishing chemicals used during the fire-training exercises have included aqueous-film-forming-foam, halon, protein-foams, carbon dioxide, dry chemicals and chlorobromomethane.

The Gateway Lake Ash Study Area is located in the southeast portion of Ellsworth AFB. The site is located in a low area approximately 400 feet south of Gateway Lake and north of the Ellsworth AFB wastewater treatment facility. The area is generally level open terrain that is grass covered and bounded on the north by trees and on the east by an unnamed creek. To the west is the entrance road to the Base's wastewater treatment plant and to the south is the wastewater plant.

The open land that contains the Gateway Lake Ash Study Area had come under consideration for construction of a new building when soils at the proposed building site were assessed. Two exploratory geotechnical borings were drilled in August 2002 that encountered ash debris and glass material. Further evaluation provided information that the area was once an open ravine which had been filled with ash and debris. An incinerator to the south was identified as a potential source of the fill debris. Over time, the area had been graded and a portion within the fenced boundary of the wastewater treatment facility had been seeded with grass. Except for the planted trees to the north, the remaining area has since grown over with natural grass and shrubs.

The Pride Hangar Study Area is located at the northwest corner of the Pride Hangar within OU-11 and covers approximately 1.7 acres. Two former side-by-side waste solvent underground storage tanks located on the northwest corner of the Pride Hangar were the primary source of a TCE plume known as the Pride Hangar plume. These tanks were removed in 1992.

A map identifying the areas to be deleted is available in the partial deletion docket. The groundwater medium at the Ellsworth AFB Site (OU-11, Basewide Groundwater) will remain on the NPL and response activities will continue for that OU.

Operable Unit 1

An extensive RI was conducted to characterize site conditions at OU-1 in 1993 and 1994. The program included completion of boreholes, installation of monitoring wells, geotechnical analysis of soil samples, ecological investigations, assessment of human health risks, and review and compilation of previous IRP investigations. Collection and laboratory analysis of soil, groundwater, surface water, and sediment samples were included in the RI field program.

Soil impacted by past activities at OU-1 extends from the surface to the capillary fringe beneath the former FPTA. The nature of the soil contamination at OU-1 soils included JP-4 (jet fuel), benzene, toluene, ethylbenzene and xylene (BTEX), and chlorinated volatile organic compounds (VOCs). JP-4 contamination was in a range of hundreds of thousands to millions of micrograms per kilogram ($\mu\text{g}/\text{kg}$) in vadose zone and capillary fringe soils. Total BTEX contamination was in a range of non-detect (ND) to hundreds of thousands of $\mu\text{g}/\text{kg}$ in vadose zone soils, and thousands to tens of thousands of $\mu\text{g}/\text{kg}$ in capillary fringe soils. Total chlorinated VOCs contamination was

in a range of ND to tens of µg/kg in vadose zone soils, and ND to hundreds of µg/kg in capillary fringe soils.

A baseline risk assessment indicated that the soils of the burn-pit area posed an unacceptable risk, primarily from the potential for contaminating the underlying groundwater. Risks from exposure to pesticides and dioxins/furans in surface and subsurface soils at OU-1 were well below the acceptable range and did not warrant remediation. Contaminants in surface water and sediment included VOCs, semi-volatile organic compounds (SVOC), pesticides, one phthalate, one polynuclear aromatic hydrocarbon and inorganics including cyanide, thallium, mercury, arsenic, manganese and nickel. However, it was determined in the risk assessment that the levels of these contaminants fell within the acceptable risk range, and therefore, no remedial action was warranted for surface water or sediment.

A Final ROD for an Interim Remedial Action (IRA) for OU-1 was signed in May 1995. The objective of the IRA at OU-1 is to reduce the immediate risks posed by the contaminants in the deeper subsurface soils of the burn-pit areas of the FPTA and to prevent the movement of contaminants to shallow ground-water. The interim remedy included soil vapor extraction (SVE), groundwater removal using wells and an existing interceptor trench, treatment of groundwater, condensate, and soil gas, and surface water discharge of treatment effluent. Only the SVE system pertains the media being proposed for deletion. The SVE system consisted of four dual phase extraction wells and eight soil vapor extraction wells, and a soil vapor blower with soil gas treated by thermal oxidation before discharge.

The OU-1 SVE system began operation in March 1996 and operated until the final remedy was implemented. The thermal oxidizer was operated from March 1996 to November 1996 when blower discharge contaminant levels were low enough to discharge to the atmosphere.

The 1995 Feasibility Study for OU-1 recommended expanding the IRA SVE system to remove volatile organic chemicals from source area soils. A Final ROD for Remedial Action at OU-1 was signed in May of 1996. The remedial action objectives (RAOs) are: (1) the cleanup of ground water to regulatory levels and, for contaminants where regulatory levels are not available, to levels considered safe for public drinking water, and (2) the cleanup of source area soils to levels that would not pose a threat of contaminating ground water. The selected remedial action included: continued operation of the IRA SVE system to remediate a portion of the source area soils; use of groundwater wells and an existing collection trench to remove contaminated groundwater in the source area; installation and use of additional SVE wells, groundwater wells and/or collection trenches; treatment of soil gas and contaminated groundwater at the IRA treatment plant; implementing institutional controls (deed and land use restrictions) to restrict the future use of the area while the remedy is being implemented; and providing for long-term monitoring and maintenance. Only the SVE system and the institutional controls apply to the media being proposed for deletion.

The Final ROD set cleanup goals for four VOCs identified for remediation in soil: benzene (10 µg/kg), 1,2-dichloroethylene (DCE) (41 µg/kg), tetrachloroethylene (PCE) (10 µg/kg), and trichloroethylene (TCE) (10 µg/kg). Cleanup goals for these four VOCs were based on model estimates for the protection of groundwater. Where model

estimates were less than standard detection limits, remediation cleanup goals were based on standard detection limits. Remediation of jet fuel in the soil at OU-1 was also required because concentrations of jet fuel and related components exceeded State of South Dakota regulations. Cleanup goals for petroleum related contamination were set at: JP-4 (500,000 µg/kg), toluene (15,000 µg/kg), ethylbenzene (10,000 µg/kg), xylene (300,000 µg/kg), and naphthalene (25,000 µg/kg).

An additional SVE blower, seven dual phase extraction wells, a dual phase extraction trench and four soil vapor extraction wells were installed as part of the Final Remedial Action. The IRA system was incorporated into the final remedy. Construction of the remedial action was completed in June 1997.

This alternative included institutional controls, implemented August 27, 1997, to prevent human exposure to contaminated soil and groundwater. These controls include: (1) issuing a continuing order to restrict on-site worker access to contaminated soil, and to restrict or control temporary construction activities unless proper protective equipment is worn; (2) filing a notice with the State to recommend denial of water appropriation permit applications to install groundwater wells within the area of contamination and any area which may be effected by potential contaminants; (3) filing a notice to the deed detailing the restrictions of the continuing order and groundwater well restrictions; and (4) a covenant to the deed in the event of property transfer. The continuing order is reissued with five year reviews and the most recent is dated August 5, 2010.

Operation and maintenance of the SVE system included collecting samples at the blower stacks and calculating mass removals, measurements of individual well vacuums and contaminant levels, and blower vacuum. Based on these measurements, operation of

the SVE wells and the SVE component of dual phase wells were optimized by applying vacuum to the points of highest contaminant concentration. Based on system monitoring, one SVE blower was shut off in March 2000 and operation of one SVE blower was focused on wells with the highest contaminant concentration. Two additional dual phase extraction wells were installed in June 2003 and began operation in October 2003 to address free product and improve groundwater plume containment.

SVE operation continued until July 2007. SVE operation was suspended in 2007 because monitoring data showed that SVE contaminant mass removal rates had diminished significantly and the removal rates remained low.

A high vacuum extraction system (HVE) was operated from May to November 2007 and from May to November 2008. The HVE system operated at 15 wells (nine monitoring wells and six dual extraction wells) with the primary purpose of removing residual free product. Operation and maintenance of the HVE system included measuring hydrocarbon concentrations in the vapor discharge, measurement of vacuum at individual wells and at the vacuum blower, and drawdown at individual wells. Operation of the HVE system was suspended in November 2008 after free product was no longer observed at any of the wells on site.

A bioventing system was operated at OU-1 from November 2008 through August 2010 to enhance the biological degradation of fuel-related contaminants BTEX; naphthalene; and total petroleum hydrocarbons as gasoline-range organics [GRO] and diesel-range organic [DRO]) in the vadose zone soils. Bioventing was designed to replace the SVE system and utilized existing SVE wells, dual extraction wells, and associated piping. Fifteen SVE and dual extraction wells were used in the bioventing

system. Operation and maintenance of the bioventing system included measuring oxygen and carbon dioxide levels in bioventing wells, and recording pressure, temperature and flow from the blower.

Post one year bioventing soil samples were collected in January 2010 at six boring locations where soil samples collected in 1989 or 1993 had exceeded OU-1 soil cleanup goals. Analytical results from vadose zone soils for ethylbenzene, naphthalene, toluene and xylene at the six borings were all below reporting limits (6.9 µg/kg maximum) and below cleanup goals based on State Regulations for each compound (ethylbenzene 10,000 µg/kg, naphthalene 25,000 µg/kg, toluene 15,000 µg/kg, and xylene 300,000 µg/kg). The maximum DRO result from the vadose zone soil samples was 210,000 µg/kg and the maximum GRO result from the vadose zone soil samples was 1,700 µg/kg, both below the cleanup goal of 500,000 µg/kg for JP-4 in soil based on State Regulation.

With respect to the contaminants of concern cis-1,2-DCE, benzene, PCE, and TCE, the analytical results in the vadose zone showed the concentrations were all below reporting limits, which were below the cleanup goals established in the Final ROD. These data demonstrate the cleanup goals have been met.

The 2010 five year review recommend evaluating existing data to determine if partial deletion of surface soil, unsaturated subsurface soil, surface water and sediment from OU-1 is appropriate. Subsequent data evaluation indicated that unsaturated soils met the cleanup levels documented in the ROD and is protective of groundwater. The next five year review is scheduled for the year 2015.

Gateway Lake Ash Study Area

Electromagnetic survey data from the August 2003 Draft Preliminary Assessment/Site Investigation (PA/SI) Report indicated the areal extent of the ash and debris was approximately 1/3 acre. Field observations and soil borings indicated the ash and debris were 6 to 7.5 feet in thickness and typically encountered within one foot of the surface.

The PA/SI reported contaminants in the ash and debris and soils including VOCs, SVOCs, metals and dioxins/furans. Detected results were compared to the USEPA Region 3 Risk Based Concentrations (RBCs). The industrial soil screening value at a 1×10^{-6} risk level was used for dermal and inhalation risk and the dilution attenuation factor (DAF) of 20 was used for evaluating the soil to groundwater migration pathway. Detected metal concentrations were compared to regional concentration ranges as established in the RI Report for nearby OU-6.

Three VOCs were detected in the ash and debris but concentrations did not exceed industrial or DAF 20 values. Five SVOCs (1,4-dichlorobenzene, 2,4-dinitrotoluene, 4-nitrophenol, N-nitrosodi-N-propylamine, and 1,2,4-trichlorobenzene) exceeded DAF 20 standards and one SVOC (N-nitrosodi-N-propylamine) exceeded industrial soil standards in the ash and debris. Four VOCs and one SVOC were detected in the soil beneath the ash and debris but concentrations did not exceed industrial or DAF 20 screening levels. Low concentrations of VOCs and SVOCs in the underlying soils indicated the contaminants in the buried ash and debris did not greatly impact the underlying soils.

Metals were detected in the ash and debris with arsenic exceeding RBCs but within the range of background concentration in surrounding soils. Arsenic and mercury

exceeded both industrial and DAF 20 screening levels. Manganese exceeded the DAF 20 screening level in the underlying soil but was considered to be within background ranges. Toxicity Characteristic Leaching Potential metals and pH analysis indicated the ash and debris material was non-hazardous. Results for dioxins/furans indicated the maximum concentration in the ash and debris was below screening criteria and similar to background concentrations. Based on the characterization of the ash and debris and no evidence of contaminant migration under the debris or outside the buried debris limits, no further actions were recommended. No RI or FS was completed for the Gateway Lake Ash Study Area soils.

The Air Force, independent of CERCLA, determined that the ash material should be removed from the site and disposed properly at a licensed land disposal facility (the Rapid City Landfill). In January 2007, 4,310 cubic yards of ash material was hauled to the Rapid City Landfill and used as daily cover material. Confirmation sampling of underlying soils for SVOCs detected one SVOC compound, bis(2-ethylhexyl)phthalate, at 74 µg/kg, that was below the DAF 20 value of 2,889,000 µg/kg for that compound. The excavated area was restored by backfilling with clean soil from stockpiles and excavations on Base, and reseeded the site. The characterization of the ash and debris, removal of the ash debris from the site, and results from confirmation sampling in the underlying soil demonstrate that the site is clean.

The Gateway Lake Ash Study Area overlies OU-11, Basewide Groundwater. As a result, the institutional controls for OU11 apply to this area. The ICs selected in the 1997 OU11 ROD included (1) issuing a continuing order (by the Installation Commander) to restrict or place limitations on the installation of any new ground-water

wells; (2) filing a notice in environmental and real estate records at the Base or Installation, detailing the restrictions of the continuing order and ground-water well restrictions; and (3) compliance with the provisions of CERCLA Section 120(h)(3) or other applicable statutory requirements in the event of property transfer. These ICs were implemented August 27, 1997.

The Gateway Lake Ash Study Area was addressed in the 2010 Five Year Review as an area not deleted during the previous partial deletion. No recommendations were made regarding the Gateway Lake Ash Study Area in the 2010 Five Year Review. The next five year review is scheduled for the year 2015.

Pride Hangar Study Area

The Pride Hangar Study Area is located at the northwest corner of the Pride Hangar within OU-11 Area 1 and covers approximately 1.7 acres. Two former side-by-side waste solvent underground storage tanks located on the northwest corner of the Pride Hangar were the primary source of a TCE plume known as the Pride Hangar plume. These tanks were removed in 1992. A soil sample was collected from near the floor of the tank excavation (10 feet below ground surface) in 1993 and analyzed for VOC. TCE was reported at 0.09 mg/kg.

During the 1994 RI for OU-11 Basewide Groundwater, a groundwater sample collected near the tank site contained total 1,2-DCE at 11 µg/L, chloroform at 1,580 µg/L, TCE at 6,800 µg/L and JP-4 at 270 µg/L. A soil boring at that same location was non-detect for VOCs and SVOCs in the capillary fringe. The FS for OU-11 Basewide Groundwater Area 1 recommended, and the OU-11 ROD specified groundwater extraction and treatment in OU-11 Area 1. A vacuum extraction system was installed to

extract contaminated groundwater and operated southeast (downgradient) of the Pride Hangar from 1997 to 2006. No RI or FS was completed for soils at the Pride Hangar Study Area.

Additional soil sampling was completed at the Pride Hangar Study Area in 2002. In eleven vadose zone soil samples, TCE results ranged from $<5 \mu\text{g/kg}$ to $120 \mu\text{g/kg}$ and cis-1,2-DCE was detected in only one sample at $40 \mu\text{g/kg}$. The September 3, 2003 Serial Letter 1-54-RA-301, Pride Hangar Source Remediation Recommendation, recommended SVE to remove chlorinated VOCs in the vadose zone at the Pride Hangar Study Area. This action was implemented and consisted of SVE pilot testing in May 2004 and intermittent operation of the SVE system from July to November 2004. The SVE system consisted of an SVE blower, eight SVE wells, and temporary above-ground piping. Operation and maintenance of the SVE system included monitoring vacuum at the wells and blower, and vapor flow rate at the blower. The SVE system was shut down due to the potential aeration of groundwater and its detrimental effect on anaerobic groundwater treatment implemented in 2004. A 2007 Explanation of Significant Differences allowed for continued use of the SVE system at the Pride Hangar Study Area even but the SVE system was not operated again.

Vadose zone soil samples were collected from direct push borings in the Pride Hangar Study Area in 2010. Soil samples included samples collected in the vadose zone at the depths where chlorinated VOC concentrations were highest in 2002. TCE concentrations in vadose zone samples were all non-detect except for three detections at concentrations of 0.58, 0.52 and $0.52 \mu\text{g/kg}$. These TCE contaminant concentrations are above the most conservative EPA Regional Screening Level for protection of

groundwater for TCE but are within the acceptable risk range given the change in the TCE toxicity value. Cis-1,2-DCE concentrations in vadose zone samples were all non-detect except for one detection of 0.81 µg/kg. This cis-1,2-DCE concentration is below the EPA Regional Screening Level for protection of groundwater for cis-1,2-DCE of 21 µg/kg for a DAF of one. These vadose zone soil sample results, reported in the August 2011 Pride Hangar Vadose Zone Soil Sample Results technical memorandum, indicated a significant source of contaminated soil no longer existed.

The Pride Hangar Study Area overlies OU-11, Basewide Groundwater. As a result, the institutional controls for OU11 apply to this area. The ICs selected in the 1997 OU11 ROD included (1) issuing a continuing order (by the Installation Commander) to restrict or place limitations on the installation of any new ground-water wells; (2) filing a notice in environmental and real estate records at the Base or Installation, detailing the restrictions of the continuing order and ground-water well restrictions; and (3) compliance with the provisions of CERCLA Section 120(h)(3) or other applicable statutory requirements in the event of property transfer. These ICs were implemented 27 August 1997.

The Pride Hangar Study Area was addressed in the 2010 Five Year Review as an area not deleted during the previous partial deletion. No recommendations were made regarding the Pride Hangar Study Area in the 2010 Five Year Review. The next five year review is scheduled for the year 2015.

Community Involvement

Community involvement activities that have taken place include publishing the FFA and RODs for public comment, establishing and maintaining an Administrative

Record, and formation of a Restoration Advisory Board (RAB) to facilitate input in the cleanup process. The RAB includes Ellsworth AFB, EPA and SDDENR oversight personnel as well as community leaders and local representatives from the surrounding area. RAB meetings are held twice each year, normally in May and November.

Determination that the Criteria for Deletion have been Met

EPA, with concurrence from the State of South Dakota, through the Department of the Environment and Natural Resources, by a letter dated November 22, 2011, has determined that no additional response is necessary at Ellsworth AFB for surface soil, unsaturated subsurface soil, and surface water and sediment media at OU-1, the Gateway Lake Ash Study Area and the Pride Hangar Study Area. Responsible parties have completed all appropriate response actions required and the unsaturated subsurface soil is cleaned up at OU-1 and the Pride Hangar Study Area. Investigation of the Gateway Lake Ash Study Area showed that it posed no significant threat to public health or the environment and removal of the debris eliminated any potential threat, therefore, the taking of remedial measures is not appropriate. Therefore, EPA is proposing to delete these portions of the Ellsworth AFB Site.

EPA Region 8 has followed the procedures required by 40 CFR 300.425(e). The EPA has consulted with the State of South Dakota and provided the state 30 working days for review of this notice prior to publication. The State, through the Department of Environment and Natural Resources has concurred with the deletion of surface soil, unsaturated subsurface soil, and surface water and sediment media at OU-1, the Gateway Lake Ash Study Area and the Pride Hangar Study Area from the Ellsworth AFB Superfund Site. Concurrent with the publication of the Notice of Intent for Partial

Deletion in the Federal Register, a notice is being published in The Rapid City Journal.

The EPA placed copies of documents supporting the proposed partial deletion in the deletion docket, and made these items available for public inspection and copying at the Site information repositories.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous waste, Hazardous substances, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Authority: 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601-9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p.351; E.O. 12580, 52 FR 2923, 3 CFR, 1987 Comp., p.193.

Signed: James B. Martin
Regional Administrator
Region 8

Dated: February 8, 2012

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